

**Precipitation.**—The average was 1.10 below the normal; greatest monthly, 1.49, at Brookings; least monthly, trace, at Piedmont, Sioux Falls, and Tyndall.

**Wind.**—Prevailing direction, south.—*S. W. Glenn, Local Forecast Official, Weather Bureau, Huron, director.*

#### TENNESSEE WEATHER AND CROP SERVICE.

**Temperature.**—The mean was 1.0 below the normal; maximum, 92, at Arlington, 10th, and at Byrdstown, 25th; minimum, 38, at Johnson City, 29th; greatest monthly range, 50, at Newport and Milan; least monthly range, 28, at Lookout Mountain.

**Precipitation.**—The average was 0.54 below the normal; greatest monthly, 5.42, at Chattanooga; least monthly, 0.60, at Springdale.

**Wind.**—Prevailing direction, south.—*J. B. Marbury, Local Forecast Official, Weather Bureau, Nashville, director.*

#### TEXAS.

**Temperature.**—The mean was 0.4 below the normal; maximum, 101, at College Station, 24th, at Aurora and Roby, 27th, and at Highland, 28th; minimum, 36, at Fort Hancock, 14th; greatest monthly range, 63, at Fort Hancock; least monthly range, 21, at Galveston.

**Precipitation.**—The average was 2.50 below the normal; greatest monthly, 5.99, at Tyler; least monthly, 0.00, at Fort Hancock and Hartley.

**Wind.**—Prevailing direction, southeast.—*D. D. Bryan, Galveston, director; I. M. Cline, Local Forecast Official, Weather Bureau, assistant.*

#### UTAH.

The month was one of the driest on record.

**Temperature.**—Maximum, 102, at Saint George, 7th and 16th; minimum, 20, at Scofield, 21st; greatest monthly range, 67, at Scofield; least monthly range, 36, at Grouse Creek.

**Precipitation.**—Greatest monthly, 0.54, at Ogden; least monthly, 0.00, at several stations.

**Wind.**—Prevailing direction, southeast.—*G. N. Salisbury, Observer, Weather Bureau, Salt Lake City, director.*

#### VIRGINIA.

**Temperature.**—Maximum, 90, at Nottoway, 25th, at Petersburg, 1st, and at Richmond, 5th; minimum, 36, at Hot Springs, 26th; greatest monthly range, 48, at Nottoway; least monthly range, 31, at Mossingford and Norfolk.

**Precipitation.**—Greatest monthly, 4.96, at Avon; least monthly, 1.33, at Norfolk.

**Wind.**—Prevailing direction, northeast.—*Dr. E. A. Craighill, Lynchburg, director; J. N. Ryker, Observer, Weather Bureau, assistant.*

#### WEST VIRGINIA.

**Temperature.**—Maximum, 92, at Spencer, 1st; minimum, 32, at Morgantown, 30th; greatest monthly range, 51, at Spencer; least monthly range, 33, at Martinsburg.

**Precipitation.**—Greatest monthly, 4.49, at Glenville; least monthly, 1.32, at Hinton.—*W. W. Dent, Observer, Weather Bureau, Parkersburg, director.*

#### WISCONSIN.

**Temperature.**—The mean was slightly above the normal, except in the central counties where it was slightly below; maximum, 95, at Whitehall, 24th and 30th; minimum, 29, at Barron, 26th.

**Precipitation.**—The average was considerably below the normal; greatest monthly, 4.26, at Baraboo; least monthly, 0.45, at Bayfield.—*W. L. Moore, Local Forecast Official, Weather Bureau, Milwaukee, director.*

#### WYOMING.

**Temperature.**—Maximum, 93, at Wheatland, 27th; minimum, 19, at Saratoga, 11th; greatest monthly range, 65, at Saratoga; least monthly range, 42, at Lander.

**Precipitation.**—Greatest monthly, 1.60, at Fort Yellowstone; least monthly, 0.00, at Evanston, Fort Washakie, Saratoga, and Wheatland.

**Wind.**—Prevailing direction, south.—*E. M. Ravenscraft, Observer, Weather Bureau, Cheyenne, director.*

### CONTRIBUTIONS AND ORIGINAL ARTICLES.

#### A SEPTEMBER NORTHER ON THE MEXICAN COAST.

The following description of a "norther" which prevailed along the Mexican coast about Vera Cruz, Mexico, from September 24 to 27, 1892, is furnished by Mr. G. Baturoni, of the Meteorological and Climatological Observatory of the Literary and Mercantile Institute, Vera Cruz:

During the latter part of the month we suffered from a "norther" which was a veritable cyclone and which, if it were not felt at the American ports of the Gulf, would serve to throw a great deal of light upon our investigations, as it would be evidence that some of these "northers" form and develop in the Gulf of Mexico without having any connection with the American "northers."

This storm began on the 24th and continued until the 27th. The maximum wind velocity was reached on the 25th, when it continued with undiminished strength for 6 hours. It blew continually in whirls, carrying away roofs of small houses in the environs of Vera Cruz, dashed the American brig "Bazanes" upon the coast, interrupted telegraphic communication, and caused serious damage on the Mexican Railroad. In the southern part of the state of Vera Cruz, even on the frontier, including Oaxaca, the storm was terrible in character and disastrous in its effects, and lightning was an attendant phenomenon. In that section 5 brick and more than 200 wooden houses were thrown down, a large number of cattle were killed, crops were ruined, trees were uprooted

in great numbers, and, what was still worse, many persons were killed and numbers were injured. At Pachuca and to the north of Vera Cruz the storm was very severe.

At Vera Cruz the wind began to blow from the north on the 23d; at 10 a. m. its velocity was 4 miles per hour; at 3 p. m. 6 miles per hour, and at 10 p. m. 4 miles per hour. At midnight the wind was from the northwest. From 4 to 5 a. m., 24th, there was a torrential rain. The rain ended and the wind remained in the west, returning to north at 9 a. m. At 10 a. m. the velocity was 8 miles per hour; at 3 p. m. 10 miles, and at 10 p. m. 18 miles. The night of the 24th was rainy. At daybreak on the 25th the wind was west-northwest; at 8 a. m. it was north and blowing vigorously; at 10 a. m. it was blowing at the rate of 15 miles per hour; toward 11 a. m. it shifted to west. At 11 a. m. Tampico began to feel the "norther," force 7. As soon as the wind settled in the west the sea gave forth a sound like the continuous rumbling of distant but approaching thunder. At 3 p. m. the wind was still from the west; at 5 p. m. it changed suddenly to north, increasing in strength and blowing in whirling squalls, each more violent than the last. At 10 p. m. the wind velocity was 40 miles per hour and rain fell in torrents. After 10.30 p. m. the squalls, in spite of the rain, were very frequent and showed a velocity of 48 miles per hour. This velocity was doubtless exceeded, but it was impossible to measure it exactly, owing to wind and rain. Violent wind and heavy rain continued until 1 a. m. of the 26th, when the wind diminished in force. The rain continued, however, and in 30 hours more than 5 inches of water fell.

### METEOROLOGICAL TABLES.

*Meteorological record of Army post surgeons, voluntary, and other co-operating observers, September, 1892.*

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean.			Max.	Min.	Mean.	
<i>Alabama.</i>	o	o	o	<i>Ins.</i>	<i>Alabama—Cont'd.</i>	o	o	o	<i>Ins.</i>
Alco	88	53	72.7	1.15	Fayette	85	50	69.4	1.16
Bermuda *†	87	47	72.5	1.15	Florence a†	87	46	68.2	3.76
Bessemer	90	49	71.1	6.35	Fort Deposit†	88	53	72.0	1.55
Brewton†	96	52	76.5	3.00	Gadsden†	90	57	75.0	2.54
Carrollton *†	86	53	71.0	1.84	Geneva†	88	53	71.5	2.17
Citronelle†	86	60	74.6	4.65	Healing Springs†	95	60	75.2	3.45
Claiborne Landing†	86	55	70.5	1.25	Jasper†	86	37	67.6	5.20
Cordova†	86	55	70.0	4.63	Livingston a†	88	51	71.3	0.67
Daphne†	97	55	77.0	6.58	Livingston b†	90	48	71.5	0.73
Decatur a†	86	43	66.8	5.01	Lock No. 4*	88	58	71.5	2.38
Decatur b†	86	43	66.8	4.47	Lynn†	89	51	70.0	6.08
Eufaula a†	89	50	74.3	3.14					
Evergreen†	89	51	73.3	2.08					

*Meteorological record of voluntary observers, &c.—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precip'n.	Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean.			Max.	Min.	Mean.	
<i>Alabama—Cont'd.</i>	o	o	o	<i>Ins.</i>	<i>Alabama—Cont'd.</i>	o	o	o	<i>Ins.</i>
Marion	89	53	72.4	3.35	Thomasville†	90	58	73.4	2.43
Maysville†	82	54	69.5	7.51	Tuscaloosa†	86	52	68.2	2.57
Mount Willing†	82	54	73.9	2.26	Tuscumbia a†	86	52	68.2	3.86
Newburg†	85	47	68.2	4.59	Tuscumbia b†	87	48	69.0	2.94
Opelika†	88	55	73.6	2.72	Union Springs a†	91	51	72.8	3.36
Oxanna *†	85	48	69.0	2.54	Union Springs b†	94	50	72.2	3.38
Pine Apple†	89	50	71.7	1.09	Uniontown	89	53	74.0	3.94
Pittsboro†	87	63	76.7	3.40	Valley Head†	84	44	66.7	6.09
Pushmataha†	85	50	70.2	1.25	Wetumpka*	84	60	70.0	3.09
Selma a†	85	50	68.3	1.81	Wilsonville†	84	60	70.0	2.77
Scottsboro	85	50	68.3	3.22					
Sturdevant†	85	50	68.3	3.22	<i>Alaska.</i>				
Talladega†	85	50	68.3	3.22	Killsnoot†	62	34	44.7	8.55
Tallahassee Falls†	85	50	68.3	3.22	Metlakatla†	70	38	54.8	8.38